

ABSTRACT OF THE DISCLOSURE

Disclosed is a semiconductor device capable of increasing the operational speed and reducing the power consumption. The semiconductor device includes an n-channel field effect transistor and a p-channel field effect transistor which are provided on a common base-substrate. A surface region, in which the n-channel field effect transistor is provided, of the base-substrate includes: a silicon substrate; a buffer layer formed on the silicon substrate, the buffer layer being made from a silicon-germanium compound having a germanium concentration gradually increased toward an upper surface of the buffer layer; a relax layer formed on the buffer layer, the relax layer being made from a silicon-germanium compound having a germanium concentration nearly equal to that of a surface portion of the buffer layer; and a silicon layer formed on the relax layer. Source/drain regions are formed in the silicon layer. A surface region, on which the p-channel field effect transistor is provided, of the base-substrate, includes: the silicon substrate; a silicon-germanium compound layer formed on the silicon substrate; and a cap layer formed on the silicon-germanium compound layer, the cap layer being made from silicon.